tween fronts and jet streams, questions of pressure change, and vertical motions in the atmosphere. References accompany each article.

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BAGDASARYAN, Andranik Bakhshiyevich; POGOSYAN, Kh.P., prof., red.; KAPLANYAN, M.A., tekhn.red.

[Climate of Armenia] Klimat Armianskoi SSR. Erevan, Izd-vo Akad.nauk Armianskoi SSR, 1958. 139 p. (MIRA 12:2)
(Armenia--Climate)

84-58-2-31/46

AUTHOR: Pogosyan, Kh., Professor, Doctor of Geographical Sciences

TITLE: Jet Streams (Struynyye techeniya)

PERIODICAL: Grazhdanskaya aviatsiya, 1958, Nr 2, pp 33-36 (USSR)

ABSTRACT: The article describes, in some detail, the physical nature of jet streams over various parts of the globe and explains their origin. At present the meteorologists are said to be concentrating their efforts on investigating the characteristics of jet streams, their distribution over the globe during different seasons, turbulences, etc. Much stess is laid upon wind forecasts at high altitudes. The results are expected to benefit jet aircraft traffic. Extensive observations being carried out within the program of the III IGY_m by means of radio sondes, radio pilots, meteorological rockets and artificial earth satellites will help to clarify many unknown facts about the laws governing the atmosphere. The text is accompanied by 5 chart diagrams

AVAILABLE: Library of Congress

Card 1/1 1. Jet streams (meteorology) - Analysis

49-58-4-8/18

AUTHOR: Pogosyan, Kh. P.

TITLE: On Certain Features of Jet Streams in the Atmosphere. (O nekotorykh osobennostyakh struynykh techeniy v atmosfere)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, Nr 4, pp 515-526 (USSR)

ABSTRACT: A jet stream is a strong narrow air stream with a considerable velocity gradient and a great length in the upper troposphere and lower stratosphere. The velocity usually exceeds 30 m/sec and the length, width and height are of the orders, respectively, of thousands of km, hundreds of km and a few km. Some ten years have passed since the discovery of this phenomenon, during which time many hundreds of papers have been written on the subject. This article is mainly concerned with jet streams in different latitude zones at different seasons in the Northern Hemisphere. For the investigation vertical sections of the atmosphere were taken such that the jet streams tended to cut them at right angles. These sections were extended to a level of 50 mb (20 km). The criterion for jet flow was taken to be 100 km/hour. The author gives a table of the vertical and horizontal extensions of jet streams which shows that small vertical extensions and small width are more characteristic of extra-tropical

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streams - sub-tropical streams have greater width and vertical extension. He also gives a table of maximum wind velocities along the axis from which it can be seen that these maximum velocities are comparatively small in extra-tropical jet systems. This is understandable since the axis of extra-tropical jets is mainly at 8-10 km whereas that of sub-tropical jets is at 10-13 km. The wind velocity at these heights is mainly determined by the thermal wind, so that, with the same temperature distribution in the cold and warm parts of the jet streams, the maximum velocity will be greater at the higher level. The table of maximum values refers to Eastern Europe and the adjoining regions of Asia. Over Eastern Europe, the extra-tropical jet streams are not distinguished by high wind velocities. Owing to the varying physical geography of the Earth and to the transport of air masses, the isotherms do not follow the latitude accurately. Hence the frequency of occurrence and the intensity of jet streams are different at different longitudes. In particular, the maximum velocity of jet streams arising in the region Iceland-British Isles (extra-tropical) is greater than the maximum velocity of sub-tropical streams in the Azores. On

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the other hand, extra-tropical jet streams in the Far East (140°E) are comparatively weak in the winter. As far as the structure of the jet streams is concerned, this is determined mainly by the temperature distribution in the underlying air layers. The author now gives vertical sections through the simplest type of jet stream. Between North Africa and Greenland at the time shown there were three streams. The first is sub-tropical, over Tripoli, the second is above the Apennines, and the third above the North-West of the British Isles. The maximum wind velocity in two streams is greater than 200-220 km/hour, but in the third it hardly reaches 130-140 km/hour. The axis of the jet with the maximum velocity of 220 km/hour is situated at the level where the horizontal temperature gradient changes sign. In sub-tropical streams the tropopause is broken up but in extra-tropical ones it is only inclined at an angle. The jet stream axis changes by 15° of latitude from winter to summer. The western stream occupies its most southerly position (24°-28°N) in winter, and its most northerly (43°-47°N) in the summer, giving a maximum difference of 23°. Almost the same applies to North Africa and South Asia. In the presence of jet streams the tropopause is inclined, divided into layers, or

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completely disrupted. In extra-tropical latitudes it is mainly inclined, the angle being greater for large temperature differences between hot and cold air in the front. At low latitudes the tropopause is characteristically broken up. The hypothesis has been that the inclination, division into layers or disruption correspond to different stages in the reorganisation of the tropopause in connection with the creation and evolution of jet streams. This has been supported by Murray (Refs.3 and 4) but the author's results do not confirm it. In sections taken between the equatorial zone and high latitudes, sub-tropical jet streams did not correspond to a disrupted tropopause - independent of the season, geographical region or stream intensity. In a few cases the tropopause became layered in the presence of cold intrusions. In extra-tropical jet streams, the tropopause generally remained continuous and inclined, although disruption appeared in intensive meridional reorganizations. The increase of turbulent mixing in jet stream systems helped in the disruption of the tropopause but was not the main reason. This was the difference in heights of the cold cyclones approaching the

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tropopause in middle latitudes and the warm sub-tropical anticyclones. In extra-tropical latitudes, the height difference of the tropopause above cold cyclones and warm anticyclones seldom exceeds 3-4 km. In the transitional zone the tropopause is inclined but unbroken. It breaks up only when cold air with a low tropopause comes into contact with warm air with a high tropopause. This only occurred once in several hundred cases studied. In sub-tropical jet streams, the break up of the tropopause is caused by cold air from middle latitudes approaching the tropical air mass. At low latitudes the tropopause is subject, generally, to small diurnal and annual oscillations, and situated at a constant height of 15-17 km. An air mass moving in this direction from middle latitudes has tropopause at 9-12 km. During the intrusion of the cold air, the tropopause at 9-12 km inclines under the one at 15-17 km so that two unconnected tropopauses appear. The lower tropopause sets up a new radiational state so that the upper gradually disappears. The nature of the layers is also determined by periodic intrusions of cold air with low tropopauses in low latitudes. With several intrusions, the temperature distribution is indicated by a series of tropopauses. The

intermediate ones are less well defined and as radiation conditions change they break up. It is characteristic that in winter over Asia and North Africa the break up of tropopauses is observed at latitudes 30°-40°N (i.e. in the zone of positive radiation balance). Corresponding to the displacement of the zero radiation balance line (from winter to summer) northwards and to the intensive heating of air at low latitudes, the jet stream axis and the tropical tropopause moves northwards. Between the height of maximum wind and the tropopause, there exists a fairly close connection. According to data collected by several authors, the axis of the extra-tropical jet streams is usually somewhat lower than the tropopause. According to Austin and Bonnon (Ref.8), the maximum wind velocity over Britain is 30-5 mb lower than the tropopause. However, other cases are also possible, and the author found that the axis of sub-tropical jet streams with maximum velocity are usually situated between the tropical and the polar tropopauses but nearer to the latter. Generally, the temperature distribution is such that the initial increase of wind velocity with height dies away, but at high latitudes in winter the

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wind increases with height. The jet stream axis in such circumstances is at a level of 75-25 mb. It is noticeable that during winter in the Arctic Circle, the tropopause is frequently observed at between 300 and 200 mb, i.e. higher than in the warm part of the year. The tropopause in high latitudes is not a clearly defined layer as it is in middle and low latitudes. It seems probable that in the movement of air masses to lower latitudes some of the water vapour contained in the upper troposphere is transmitted and acts as a cooling agent during the polar night. It would appear that the tropopause in the Antarctic acts much the same as in the Arctic. In the change from polar night to day, air in the lower stratospheric layers gradually heats up and the tropopause changes into a well-defined layer lying lower than in winter. The maximum height is equal to 11 320 m ($T = -55.2^{\circ}$) and the minimum to -6370 m ($T = -33.6^{\circ}$). The chief type of tropopause in summer is a well-defined inversion. The author gives graphs of the temperature distribution with height in the Central Arctic during winter and summer. In winter the temperature decreases up to 300-250 mb, the fall thencontinuing but with small values of the vertical temperature gradient. At 75-50 mb the air temperature is

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On Certain Features of Jet Streams in the Atmosphere.

-70° or lower; between 300 mb and 50 mb the temperature drops by an average of 10°-15°. In summer the air temperature decreases up to 300 mb, after that rising again until at 70-50 mb it reaches -40°. Thus the temperature difference between January and July in the 150-50 mb layer is ~30°. At the same time in the lower stratosphere at middle latitudes the air temperature undergoes small oscillations between the limits -50° to -60°. Thus the velocity of the West wind above the tropopause increases with height in winter and decreases in summer - at about 20 km the wind is East. The author gives other temperature graphs showing how the seasonal difference in temperature distribution in the lower stratosphere grows from low latitudes to high. In the equatorial zone the annual temperature amplitude is insignificant but becomes large near the pole. The greatest temperature amplitude in the tropopause is at latitudes 30°-60° in the lower stratosphere. In comparing the temperature differences between winter and summer, the author finds that at longitude 80°W (between the equator and 30°N) the temperature difference in the tropopause is less than 5°. The distribution of ocean and dry land and the corresponding

On Certain Features of Jet Streams in the Atmosphere.

heat flow from these surfaces defines the temperature distribution not only in the lower but also in the upper troposphere. The distribution of temperature differences shows that there are high values at high latitudes and at latitudes 25°-55°N dropping between to 6°-8° at heights of 10-14 km. There are 3 tables, 7 figures and 12 references, 7 of which are English and 5 Soviet.

ASSOCIATION: Tsentral'nyy institut prognozov (Central Forecasting Institute)

SUBMITTED: July 24, 1957.

1. Meteorology 2. Jet streams (Meteorology)—Analysis 3. Jet streams—Velocity 4. Jet streams—Temperature factors

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SOV/50-58-8-1/16

AUTHOR: Pogosjan, Kh. P.

TITLE: Peculiarities of the Circulation in the Atmosphere of the Antarctic (Osobennosti tsirkulyatsii atmosfery v Antarktike)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 8, pp. 3-10 (USSR)

ABSTRACT: Within the framework of the International Geophysical Year 20 observation stations could be run at the coast and in the inner region of the Antarctic (Antarktida). The present paper discusses the following problems: a) commonness and differences of the temperature distribution above the poles and b) the problem mentioned in the title. There are many common features in the temperature distribution in the height as well as in the circulation in the arctic circle (Arktika) and the Antarctic, however, also considerable differences. The common traits are due to seasonal radiation conditions, the differences to the character of the basement area (podstilayushchaya poverkhnost') and to advection. The temperature of the air in the troposphere is low in the central arctic circle and the Antarctic, compared to moderate latitudes. Over the Antarctic it is considerably lower than over the Arctic (Table 1, Fig 1), i.e. 8 - 18° higher over the Arctic. In the winter the differ-

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ences in the troposphere are reduced, rise, however, again in the stratosphere. In agreement with the above mentioned a difference exists as well between the summer- and winter temperatures between north and south pole (Table 2). In the North the difference is reduced with the height in the tro[illegible] rises, however, again in the stratosphere. In the South the temperature differences rise with height (except [illegible] of 650 - 500 mb) and reach maximum values in the stratosphere. The author tries to determine the reasons of the temperature distribution over the north and south pole. The reasons are the following: a) the passing of cyclones over the north pole which take with them warm air from the Atlantic. Drift-ice which lies 2,000 - 3,000 km around the south pole prevented here the penetration of warm air masses from the North. b) The cyclone whirls cannot penetrate in the inner Antarctic, since the ice shield (3 - 3,5 km thick) prevents them from penetrating. c) The circulation of the atmosphere is not constant in the Antarctic. d) The circulation system is connected here with cold high cyclones. e) The cooling down of the air in the winter in the layers of the ozone concentrations is so intensive that the high depression behind the polar circle is increased

and is transformed into a great cold center. This center determines the stratospherical jet-current (struynoye techeniye) the lower part of which may usually be noticed even at the level of 100 mb. There are 3 figures, 3 tables, and 5 references, which are Soviet.

POGOSYAN, Kh.P.

Jet streams over the Armenian Highland region. Izv. AN Arm. SSR. Ser. geol. i geog. nauk 11 no.2:55-70 '58. (MIRA 11:9)

1.Armyanskoye geograficheskoye obshchestvo.
(Armenian Highland--Jet stream)

POGOSYAN, Kh. P.

(13)

PHASE I BOOK EXPLOITATION SOV/5606

Nauchnaya konferentsiya po problemam meteorologii Antarktiki, Moscow, 1959

Tezisy dokladov (Theses of Reports at the Scientific Conference on Meteorological Problems in Antarctica, Moscow, 1959) Moscow, Gidrometeoizdat (Otd-niye) 1959. 47 p. 1,000 copies printed.

Ed.: O.G. Krichak; Tech. Ed.: I.M. Zarkh.

PURPOSE: The publication is intended for meteorologists, particularly for those interested in the climatology of Antarctica.

COVERAGE: This book contains summaries of thirty-five reports presented at the Scientific Conference on Meteorological Problems in Antarctica, held in Moscow, October 26 to 28, 1959. The summaries are arranged in four groups: (1) general problems of the geography of Antarctica; (2) atmospheric circulation; (3) radiation balance, heat balance, climate and special features of individual elements; (4) methods of observation and measurement. No personalities are mentioned. There are no references.

PART I. GENERAL GEOGRAPHICAL PROBLEMS

PART II. ATMOSPHERIC CIRCULATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341610011-3"

3(7) PHASE I BOOK EXPLOITATION SOV/2220

Pogosyan, Khoren Petrovich

Obshchaya tsirkulyatsiya atmosfery (General Circulation of the Atmosphere) Leningrad, Gidrometeoizdat, 1959. 259 p. 2,000 copies printed.

Resp. Ed.: A. S. Zverev; Ed.: M.M. Yasnogorodskaya; Tech. Ed.: M. I. Braynina.

PURPOSE: This book is intended for meteorologists, particularly those in synoptics and aerology.

COVERAGE: This book discusses various modern concepts on general atmospheric circulation. The effect of radiative and turbulent atmospheric processes on the formation of high-altitude baric fields, and on the field of streams, is shown for various seasons. Specific features of circulation are discussed. Special attention is paid to the formation of high-altitude frontal zones and jet streams, and to atmospheric circulation in various latitudinal zones (especially, to the trade winds). There are 164 references: 97 Soviet, 48 English, 17 German, and 2 French.

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Pogosyan, Kh. P.

3(3) PHASE I BOOK EXPLOITATION SOV/3223

Akademiya nauk SSSR. Kompleksnaya antarkticheskaya ekspeditsiya

Klimat Antarktiki (Climate of the Antarctic) Moscow, Geografgiz, 1959. 285 p. (Series: Its: Trudy; Meteorologiya i klimatologiya) Errata slip inserted. 4,000 copies printed.

Ed.: S. N. Kumkes; Tech. Ed.: S. M. Kosheleva; Editorial Board: V. F. Burkhanov, B. L. Dzerdzeyevskiy, Kh. P. Pogosyan, and G. M. Tauber.

PURPOSE: This book is intended for meteorologists and climatologists. It will be of interest to all earth scientists concerned with the Antarctic region.

COVERAGE: This book contains 18 articles on the weather and climate of Antarctica. Articles represent the generalized results of processing data obtained by the Soviets during their expeditions to the Antarctic, 1955-1958. Individual authors have attempted to clarify and unify previously divergent views on Antarctic meteorological processes (zonal circulation, temperature distributions, cyclonic and anticyclonic movement, etc.). No personalities are mentioned. References accompany individual articles.

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KHRGIAN, Aleksandr Khristoforovich; POGOSYAN, Kh.P., otv.red.; VLASOVA, Yu.V., red.; VLADIMIROV, O.G., tekhn.red.

[An outline of the development of meteorology] Ocherki razvitiia meteorologii. Izd.2., perer. Leningrad, Gidrometeor.izd-vo. Vol.1. 1959. 427 p. (MIRA 12:8)
(Meteorology)

3(7)

AUTHOR: Pogosyan, Kh. P.

SOV/5o-59-2-3/25

TITLE: The Jet Stream in the Stratosphere During the Cold Season (Stratosfernoye struynoye techeniye v kholodnoye polugodiye)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 2, pp 15 - 21 (USSR)

ABSTRACT: The author first reports on the findings made during his preliminary work on the basis of observations made in 1955 and 1956 (Refs 1,2): the jet streams in the troposphere encircle the whole globe, but their frequency and intensity varies in the different geographical regions; during the season the subtropical jet stream is rather stable, but between the seasons it shifts considerably along the meridian due to the temperature distribution in the troposphere. It was the object of the present paper to determine temperature and wind conditions as well as jet stream conditions during the cold season of 1957/58. For this purpose the average monthly vertical sections for the period September 1957 through April 1958 between the equator and the North Pole were drawn, in this case between Nairobi (East Africa) and the Station

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North-Pole-7 ("SP-7") which at the time drifted between 85°N and 170°W. The sections cut across Arabia, Caucasus, the European part of the USSR, and Novaya Zemlya. The analysis of these vertical sections showed that during the transition months (September, October, and March) the temperature distribution in the lower stratosphere approaches the isothermal state at medium and higher latitudes. Thus, wind velocities usually do not mount above the tropopause. They change little with altitude, and are of the same order of magnitude as those in the tropopause. On the other hand, wind velocities increase considerably with the altitude during the winter months, in accordance with the character of temperature distribution. Between the equator and the North Pole two main jet streams in the troposphere are to be noted along the section: the subtropical jet stream and the jet stream outside the tropics. The former increases from fall to winter and shifts from the Armenian Highland and Mesopotamia to the Bahrein Islands. The latter is mostly to be found over the central part of the European USSR.

The Jet Stream in the Stratosphere During the Cold Season SOV/50-59-2-3/25

Four vertical sections are given: for January and October 1957, and for January and March 1958. In the January 1957 section the location and intensity of jet streams in winter is shown. The other three vertical sections are given for the purpose of determining the changes in the temperature and wind areas in the atmosphere during the season. The vertical sections are explained in greater detail. In order to show the characteristics of the temperature and wind changes between the equator and the North Pole troughout the season a table is given containing the temperature differences between the warm and cold parts of the high altitude frontal zones of the jet streams. These differences are given for the entire troposphere and the lower part of the stratosphere up to an altitude of 25 - 30 km. The period covered is September 1957 - March 1958. In table 2 the average maximum wind velocities at the jet stream axis are given. It is seen from the table that wind velocities increase gradually from September through February, and decrease in March. The same holds for the stratospheric jet stream found

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between the latitudes of 55 - 70°N. In the system of jet streams above the European part of the USSR and Novaya Zemlya there is no clear connection between average temperature differences and wind velocities, which may be explained by the great mobility of the high altitude frontal zone outside the tropics. There are 4 figures, 2 tables and 2 Soviet references.

3(7)

AUTHOR: Pogosyan, Kh. P.

SOV/50-59-7-1/20

TITLE: Jet Stream in the Stratosphere During the Warm Half-year (Stratosfernaya struynaya techeniya v teplyye polugodiye)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 7, pp 3 - 13 (USSR)

ABSTRACT: In the paper (Ref 4), the author presented the results of the investigations of some characteristics of the jet stream during the cold half-year between Nairobi and the drifting north pole station "SP-7". Towards spring, the winter jet stream disappears in the stratosphere, and towards summer an east-west jet stream arises which is relatively weaker than the one during winter. The jet streams in the troposphere do not undergo such strong interseasonal changes. - The vertical cross sections for July 1956, July 1957, July 1958, and the mean vertical cross section of the atmosphere for July of the three years (1956-58) are given here. The latter shows a distinctly marked subtropic jet stream over the Caucasus with a maximum speed of 120 km/h on the axis. A second, poorly marked, extratropic jet stream is situated north of Novaya Zemlya. But between this jet stream and the subtropic jet stream above the tropopause there is an area of increased wind speeds (> 60 km/h). It shows that the extratropic jet streams occurred nearly to the same

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exhaust between the Caucasus and Novaya Zemlya in July 1956-58. On the same vertical cross section, the equatorial east jet stream is clearly marked with maximum speeds near the 16-km level. The mean wind maximum speeds in this vertical cross section are more than 100 km/h. The prevailing west direction of the wind is limited by the 30 N-latitude and the pole in the range of the lower 20 km.

Between 30 N and the equator, the east direction of the wind is characteristic at all altitudes, whereas north of 30 N the east direction of the wind is also characteristic for the levels above 50 mb (20 km).--Corresponding to the temperature distribution, the axis of the west jet stream in the stratosphere with maximum speeds of 200-250 km/h must be situated near the 30-km level (Refs 11,13).- Table 1 shows the mean monthly temperature gradients in the jet stream system from March to September 1958. It shows that a considerable decrease in the temperature gradient takes place in the subtropic jet stream system from March to June and July. These gradients also decrease in the extratropic jet stream system. But the annual progress is not quite clearly marked here. - Table 2 indicates the mean wind maximum speeds at the axis of the jet streams. In the subtropic jet stream system, the speeds decrease from March

to July-August. - In the jet stream system of the stratosphere (in the lower part of the stream), the speeds of the west wind attain 140-160 km/h already on the 30-km level in winter between the latitudes of 50 and 70° (Ref 4). According to table 2, the speeds in summer are much lower (about 30-40 km/h), and wind direction is from east to west. - The causes of such seasonal change of the wind and jet stream conditions in the stratosphere are investigated. Different opinions are put forward, and it is stated that at present it is difficult to say which opinion is the right one. It is most probable that the nonperiodic processes in the stratosphere are caused both by the advection of temperature and by the vertical motions. One thing is not to be doubted: Under the influence of advection-dynamic factors, the jet stream in the stratosphere, especially in the coniferous layer, very often changes its intensity and geographical position. There are 5 figures, 2 tables, and 13 references, 7 of which are Soviet.

PHASE I BOOK EXPLOITATION SOV/4360

Pogosyan, Khoren Petrovich

Struynyye techeniya v atmosfere (Jet Streams in the Atmosphere) Moscow, Gidrometeoizdat, 1960. 182 p. 1,500 copies printed.

Sponsoring Agencies: Moscow. Tsentral'nyy institut prognozov; USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Resp. Ed.: G. D. Zubyan; Ed.: L. V. Blinnikov; Tech. Ed.: T. S. Yershova.

PURPOSE: The book is intended for meteorologists, and students in meteorological schools of higher education.

COVERAGE: This book presents the results of research on jet streams in the troposphere and stratosphere over the Northern Hemisphere, undertaken by the author and other associates of the Central Institute for Weather Forecasting during the IGY. Problems concerning the structural and other characteristics of jet streams over Eurasia are discussed in detail. Individual chapters deal with the conditions for the formation, evolution and disintegration of jet streams, their

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connection with the atmospheric fronts, baric formations, etc. A special chapter treats the formation of temperature and wind fields in the stratosphere. An attempt is made to evolve a pattern of vertical distribution of temperature and atmospheric circulation in winter and in summer up to an altitude of 90–100 km. The text is illustrated by 77 figures and 41 tables. There are 121 references: 52 Soviet, 66 English, and 3 German. The author thanks junior scientific workers K. F. Ugarova, M. V. Shabel'nikova, and A. A. Pavlovskaya; engineer Ye. N. Pavlov; and senior technicians A.N. Golovushkina, Ye. M. Mosyagina, and A. V. Semenova.

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VOVCHENKO, Pavel Grigor'yevich; ZUBKOV, Aleksandr Yemel'yanovich; POGOSYAN, Kh.P., prof., retsenzent; ZAMORSKIY, A.D., prof., retsenzent; PED', D.A., kand.geogr.nauk, retsenzent; DREMLYUG, V.V., kand.geogr.nauk, retsenzent; SAGATOVSKIY, N.V., red.; LAVRENOVA, N.B., tekhn.red.

[A brief course in meteorology and oceanography for ship navigators] Kratkii kurs meteorologii i okeanografii dlia sudovoditelei. Moskva, Izd-vo "Morskoi transport," 1960. 359 p. (MIRA 13:7)
(Meteorology, Maritime) (Oceanography)

S/050/60/000/008/001/002
B012/B056

AUTHOR: Pogosyan, Kh. P.

TITLE: Seasonal Patterns of the General Circulation of the Atmosphere

PERIODICAL: Meteorologiya i gidrologiya, 1960, No. 8, pp. 3 - 14

TEXT: A short survey is first given of the research work carried out in the field of the general atmospheric circulation after World War II. It is pointed out that, if the temperature- and wind fields in the troposphere are not subjected to any essential seasonal transformations, the changes in the stratosphere and in the mesosphere are fundamental. 4 schemes of horizontal atmospheric circulation are here given for four seasons (Figs. 1, 2, 3, 4). They are based upon the analysis of vertical cross sections of the atmosphere in the course of the past 2 - 3 years. The form of representation differs somewhat from the usual one, among other things also from that of V. Mintz (Ref. 7). In the present case the author proceeded from the fact that even in the same seasons differences exist in different longitudes, which must also be taken into

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account. For this purpose, the cross sections of the atmosphere were constructed according to the seasons along two meridian-zones, the longitudes of which differ by 140 - 150°: along the Eastern Atlantic regions and along the Western Pacific regions. Table 1 gives the names and coordinates of foreign stations and of Soviet drifting stations "СП" (SP), whose data are used in these schemes. Besides, the data of the following Soviet stations were used: Island of Kotel'nyy, Tiksi Bay, Verkhoyansk, Ayan, and Novonikolayevsk. Fig. 1 shows the characteristic features of the temperature- and air current distributions along the afore-mentioned longitudes in January. On the circumference of the inner circle, the average pressure near the ground along the cross section lines is shown by means of isobaric lines. Fig. 1 shows the low temperatures in the Arctic region, especially in the stratosphere (-65°, -75°) and comparatively high temperatures in the stratosphere above the Antarctica (-35°, -40°). It is shown that, besides the general characteristic features of atmospheric circulation, in the West and East, also considerable differences exist on the Northern hemisphere in winter, which are due to physical and geographical conditions. These differences affect the formation of the baric field near the ground as well as the

Seasonal Patterns of the General Circulation of the Atmosphere

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B012/B056

weather of the season. On the Southern hemisphere the character of the predominating circulation in January is approximately equal in the West and in the East. In a similar manner Figs. 2, 3, and 4 show and explain the characteristic features of atmospheric circulation in July, April, and October. It is pointed out that it is difficult to represent the vertical components of air motion and the air exchange between the longitudes; therefore they are not shown in the schemas shown here. In this connection the investigations carried out by M. V. Shabel'nikova and A. A. Pavlovskaya are mentioned. In Figs. 5 and 6 individual cross sections of the atmosphere in January and July along the same longitudes are given in order to show the existence of the characteristic seasonal features of the total circulation in the processes of each individual day. There are 6 figures, 1 table, and 8 references: 6 Soviet and 2 British.

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S/004/60/000/008/003/00?
A105/A026

AUTHOR: Pogosyan, Kh. P., Professor

TITLE: Amendments Originated by the Stratosphere

PERIODICAL: Znaniye-Sila, 1960, No. 8, p. 5

TEXT: Northern lights, perturbations in the magnetic field of the earth entailing disturbed radio communication, and other phenomena indicate the multiform solar influence upon the earth. In the last years, radiosondes reaching altitudes of 30 - 35 km, rockets and satellites drew the attention of meteorologists to an ozone layer surrounding the earth at altitudes of 10 - 15 km and 60 - 70 km. It is well known that ozone absorbs short-wave solar radiation and keeps organisms alive, protecting them from ultraviolet rays. Lately it has been proved that ozone, owing to its opacity, warms up during day-time and reflects the heat at night, playing the role of a thermal regulator. Over polar regions where day and night last several months, the temperature differences reach 40 - 50°C; in equatorial zones, however, at the altitude of 30 km, the air temperature remains practically constant at 50°C throughout the year. The explanation for this phenomenon of equal temperatures in winter and summer is the low content of ozone in the stratosphere above the equator. The general

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Amendments Originated by the Stratosphere

circulation of the atmosphere is determined by temperature fluctuations on earth; therefore it is evident that the thermal regime of the stratosphere has to be determined from prevailing winds. The air flow in the stratosphere reaches velocities of 250 - 350 km. According to observations some conformities in the general circulation of the atmosphere were determined. Formerly it was supposed that the air, warmed up in the equatorial zone, moved to the latidudes of the Tropics of Cancer and Capricorn, from where it returned to the equatorial zone. This idea has been revised based on latest observations. The air moves horizontally between the equator and the poles. This is an important factor for long-term weather forecasting.

Card 2/2

SHULEYKIN, V.V., akademik; KATS, A.L., kand.geograf.nauk; POGOSYAN, Kh.P., prof.; ASTAPENKO, P.D., kand.geograf.nauk

World's weather. Znan.sila 35 no.8:4-6 Ag '60.
(MIRA 13:9)
(Meteorology)

STEPANYAN, L.A., red.; ARUTYUNYAN, A.B., red.; BAGDASARYAN, A.B., prof., doktor geogr. nauk, glav. nauchnyy red.; DAVTYAN, G.S., red.; MARTIROSYAN, G.M., red.; MARUKHYAN, A.O., red.; MKRTCHYAN, S.S., red.; URUSOV, V.V., red.; SHAKHBAZYAN, M.S., red.; ALLAKHVERDYAN, G.O., kand. ekonom. nauk zam glav. nauchnogo red.; ARUTYUNYAN, N.Kh., akademik, red.; VALESYAN, L.A., kand. geogr. nauk, red.; DUL'YAN, S.M., kand. geogr. nauk, red.; YEREMYAN, S.T., red.; ZOGRABYAN, L.N.,kand. geogr. nauk, red.; KOCHARYAN, G.A., prof., red.; POGOSYAN, Kh.P., prof., doktor geogr. nauk, red.; RUTKOVSKAYA, M.S., starshiy red.; SAVELO, A.F., tekhn. red.; YAROSHEVICH, K.Ye., tekhn. red.

[Atlas of the Armenian Soviet Socialist Republic] Atlas Armianskoi Sovetskoi Sotsialisticheskoi Respubliki. Erevan, Akad. nauk Armianskoi SSR; glav. upr. geodez. i kartografii MG i OM SSSR, 1961. 111 p. (MIRA 15:2)

1. Minskaya kartograficheskaya fabrika Glavnogo upravleniya geodezii i kartografii Ministerstva geologii i okhrany nedr SSSR (for Urusov). 2. Akademiya nauk Armyanskoy SSR (for Arutyunyan). 3. Chlen-korrespondent AN Armyanskoy SSR (for Yeremyan).
(Armenia--Maps)

PED', D.A.; TURKETTI, Z.L.; POGOSYAN, Kh.P., otv. red.; BLINNIKOV, L.V., red.; ZARKH, I.M., tekhn. red.

[Distribution of the diurnal range of air temperature variations in the U.S.S.R.] Raspredelenie sutochnykh amplitud temperatury vozdukha na territorii SSSR. Moskva, Gidrometeor.izd-vo (otd-nie) 1961. 167 p. (MIRA 15:1)
(Atmospheric temperature)

POGOSYAN, Kh.P., otv. red.; MKHITARYAN, A.M., otv. red.; VARTANESOVA, A.A., red. izd-va; SARKISYAN, G.S., tekhn. red.

[Results of comprehensive research on the Sevan problem] Rezul'taty kompleksnykh issledovanii po Sevanskoi probleme. Erevan, Izd-vo AN Armianskoi SSR, 1961. Vol.1. [Meteorology and hydrology] Meteorologiia i gidrologiia. 1961. 457 p. (MIRA 14:9)

1. Akademiya nauk Armyanskoy SSR, Erivan. Institut energetiki i gidravliki.

(Sevan Lake region—Meteorology)
(Sevan Lake region—Hydrology)

KATS, A.L.; POGOSYAN, Kh.P.

"Fundamentals of long-range weather forecasting" by A.A. Girs. Reviewed by A.L.Kats. Meteor. i gidrol. no.1:57-61 Ja '61. (MIRA 14:1)

(Weather forecasting) (Girs, A.A.)

24773
S/050/61/000/008/002/002
D204/D304

3,5110

AUTHOR: Pogosyan, Kh. P.

TITLE: The geopotential field in the stratosphere

PERIODICAL: Meteorologiya i gidrologiya, no. 8, 1961, 11-19

TEXT: The author constructed world maps of baric topography at the 300, 200, 100, 50, 30 and 10 mb. levels for both summer and winter seasons. The world AT_{500} map for 1955 (Ref. 2: Planetarnyye frontali nyye zony v severnom i yuzhnom polushariyakh. (Planetary Frontal Zones in the Northern and Southern Hemispheres) Gidrometeoizdat, L., 1955), and the results of aerological surveys on vertical equator-pole sections were used to plot the maps. The meager data from the southern hemisphere were supplemented by results from other stations, situated on all the continents and major islands. In addition, in the AT_{300} and AT_{200} maps, mean monthly temperature maps of the Central Forecasting Institute

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The geopotential...

(Ref. 1: Meteorologicheskiy byulleten'. Yezhednevnyye karty pogody mira i karty srednemesyachnykh znacheniy atmosfernogo davleniya, geopotentsiala i temperatury vozdukha. Yanvar'-dekabr' 1958 g. Tsentral'nyy institut prognozov. (Meteorological Bulletin. Daily World Weather Maps and Maps of Mean Monthly Values of Atmospheric Pressure, Geopotential and Air Temperature, January-December 1958. Central Forecasting Institute.) M., 1959) were used. Joint analysis of temperature and wind in the vertical sections excluded gross errors, and the AT_{500} map was not found to differ noticeably from that in Ref. 2 (Op.cit.) Due to insufficiency of data in the southern hemisphere at greater heights, values of the geopotential at these levels were calculated by extrapolating temperatures to 25-27 km, and the homogeneity of the oceanic surface in the median latitudes of this hemisphere helps to ensure that the AT_{30} and AT_{10} maps reflect conditions at these levels sufficiently well. The AT_{200}, AT_{300} and AT_{500} maps are very similar. The AT_{200} map for January shows well defined troughs and peaks over land and sea

The geopotential...

in the northern hemisphere, with the greatest geopotential gradient over the eastern shores of Asia and America. In July, this map changes sharply, with considerable increases in geopotential and high pressure zones in the tropics due chiefly to the heating of air over North Africa and North Asia. For the southern hemisphere, the contours are closely zonal, and there is little change, except in magnitude, between the two seasons. The value of the difference in the change of geopotential between winter and summer in the northern and southern hemispheres is observed to increase with altitude. The structure of the contour field changes little with increasing height, and even at 50 mb. in January features of the topography at 500 mb. are found. However, in summer there is a substantial difference at the 50 mb. level, which lies near the level of transition of the prevailing west winds to east winds. Closed regions of low and high pressure are found with corresponding wind systems. There is a large difference in wind velocity in winter between latitudes 55°-75° in the northern and southern hemispheres at the 30 mb. level, and this is also present at the 10 mb. level. At the latter level, the geopotential field in the two hemispheres has the same overall

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POGOSYAN, Kh.P.

"Atmospheric processes in high latitudes of the Southern Hemisphere" by P.D.Astapenko. Reviewed by Kh.P.Pogosian. Meteor. i gidrol. no.12:49-52 D '61. (MIRA 14:11)
(Antarctica--Meteorology) (Astapenko, P.D.)

40244

3.5110

S/169/62/000/007/106/149
D228/D307

AUTHOR: Pogosyan, Kh. P.

TITLE: Temperature and airstream seasonal and intraseasonal changes in the stratosphere

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 7, 1962, 40, abstract 7B219 (Tr. Tsentr. in-ta prognozov, no. 104, 1961, 41-53)

TEXT: The average January and July temperatures for circles of latitude, at the isobaric surfaces 500, 300, 200, 100, 50, 30, and 15 mb, were determined every 10° of latitude in the northern hemisphere from radiometeorologic observational data for 1957-1959. The difference between the temperatures of the equatorial zone and the Central Arctic comprises ~35° in winter in the middle troposphere; it decreases to 7 - 13° at the 200-mb surface and to 2 - 8° southwards from 60°N. The temperature difference increases with altitude between middle and high latitudes but decreases between low and middle latitudes. In the stratosphere the mean air temperature

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along circles of latitude varies substantially in relation to the longitude. The highest temperatures are noted in the northern Pacific, the lowest being registered over Eurasia and the Atlantic. The average temperature difference between these areas comprises 14 - 16° in January in latitude 60° at the surfaces 50, 30, and 15 mb. The formation of regions of comparatively high temperatures in the stratosphere over the northern Pacific can be explained by the high intensity and localization of cyclonic activity in this area. In the northern Pacific the deepening of cyclones is usually accompanied by a rise in the temperature in the stratosphere; their infilling is generally accompanied by a reduction in the temperature. After the cyclones begin to fill up the regions of heat in the stratosphere disappear more slowly than they arise. A general decrease in the temperature gradients and the wind velocity between the equator and the pole takes place in summer. In July the mean temperature difference between the equatorial zone and the Central Arctic at the 500-mb surface is almost twice as small as in January. Above 200 mb the temperature in high latitudes rises and reaches -35, -38° in the layer 20 - 10 mb. In the equatorial zone, starting

Temperature and airstream ... S/169/62/000/007/106/149
D228/D307

from the tropopause (16 - 18 km), the temperature increases with altitude and reaches -45, -50° in the layer 10 - 20 mb. The temperature differences decrease within latitudinal zones. The high-temperature region in the stratosphere over the northern Pacific decreases, which is explained by the weakening of cyclonic activity in this area. A graph was constructed for the difference between the mean July and January temperatures in the northern and southern hemispheres. According to it the annual temperature variations are maximal in high latitudes of both hemispheres but are negligible in middle and low latitudes. Curves are given for the mean temperature and wind-velocity change with altitude up to 90 km in January and July at 20, 50, and 80°N. The highest temperature differences, exceeding 20 - 30°, are observed in the stratosphere (18 - 30 km), in the layer of maximum temperatures in the mesosphere (50 - 60 km), and in the layer of low temperatures in the upper mesosphere (75 - 85 km). It is noted that there are large differences in the distribution of the velocity and especially the direction of the wind in January and July. The greatest changes in the temperature and the wind fields on the globe are

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Temperature and airstream ... S/169/62/000/007/106/149
D228/D307

observed in winter in the northern hemisphere. The diurnal magnitudes of advective and adiabatic temperature changes at the surfaces 500, 300, 200, and 100 mb were calculated from baric relief maps in order to determine the causes of the considerable winter temperature rises in the Arctic's stratosphere. The rise in the temperature of the Arctic's stratosphere in winter is governed by the advection of heat from middle latitudes and by adiabatic air-temperature changes, connected with the vertical calculation. 24 references. [Abstracter's note: Complete translation.]

Card 4/4

S/169/62/000/001/052/083
D228/D302

AUTHORS: Pogosyan, Kh. P. and Shabel'nikova, M. V.

TITLE: Evolution of jet streams during meridional transformations of the thermobaric field

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1962, 49, abstract 1B316 (Tr. Tsentr. in-ta prognozov, no. 104, 1961, 89-117)

TEXT: Two cases of the meridional transformation of the thermobaric field in the Far East -- December 31 - January 3, 1958, and January 15-20, 1959 -- and the evolution of jet streams in the summer period are analyzed. The merging of extratropical and subtropical high-altitude frontal zones, the increase of the baric and thermal gradients, and the coalescence and strengthening of jet streams occur at the base of high-altitude troughs during the meridional transformation of the thermobaric field. The coalescence of jet streams into one very powerful and structurally-complex jet is observed at the time of very abrupt meridional transformations. The

Card 1/2

PED', D.A.; TURKETTI, Z.L.; POGOSYAN, Kh.P., prof., red.; YASNOGORODSKAYA, M.M., red.; FLAUM, M.Ya., tekhn. red.

[Atlas of daily ranges of air temperature in the U.S.S.R.] Atlas sutochnykh amplitud temperatury vozdukha v SSSR, Pod red. KH.P. Pogosiana. Leningrad, Gidrometeorizdat, 1962. 101 p. (MIRA 15:6)

(Atmospheric temperature)

POGOSYAN, Khoren Petrovich; DROGAYTSEV, D.A., doktor geograf.nauk, otv.red.

[Seasonal and intraseasonal variations of temperature, geopotential, and atmospheric circulation in the stratosphere.] Sezonnye i vnutrisezonnye izmeneniia temperatury, geopotentsiala i atmosfernoi tsirkuliatsii v stratosfere. Moskva, Nauka, 1965. 108 p. (Akademiia nauk SSSR. Mezhduvedomstvennyi geofizicheskii komitet. Meteorologicheskie issledovaniia, no.10)

(MIRA 19:1)

L 10428-66 EWT(1)/FCC GW

AM5027848 BOOK EXPLOITATION UR/

Pogosyan, Kha. P.; Pavlovskaya, A. A.; Shabel'nikova, M. V.

Interrelation of processes in the troposphere and stratosphere of the Northern Hemisphere (Vzaimosvyaz' protsessov v troposfere i stratosfere severnogo polushariya) Leningrad, Gidrometeoizdat, 1965. 0129 p. illus., biblio., tables. (At head of title: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR. TSentral'nyy institut prognozov) 750 copies printed.

TOPIC TAGS: synoptic meteorology, climatology, troposphere, stratosphere, atmospheric circulation, atmospheric interaction, atmospheric property, weather forecasting

PURPOSE AND COVERAGE: The authors attempt to establish the relationship and interdependence of atmospheric processes between the troposphere and the lower stratosphere and between contiguous synoptic regions in the Northern Hemisphere. Daily observations of zonal and meridional components of atmospheric circulation at the 500- and 100-mb levels over three large synoptic regions (45°W—90°E, 90°E-160°W, 160°W—45°W) in the Northern Hemisphere for the periods 1958-59 and 1961-63 were used to compute circulation indices and to

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determine annual trends in zonal and meridional circulation. Because daily measurements above the 100-mb level were not available, the relationship of tropospheric processes to fluctuations in atmospheric circulation in the stratosphere and geopotential field was determined from observations of individual anomalous processes in the middle stratosphere. Some of the conclusions derived are: 1) the intensity of zonal and meridional circulation in the troposphere has a clearly defined annual trend, which is even more pronounced in the stratosphere; 2) changes in the stratosphere which often occur simultaneously, although more frequently there is a 1-2-day delay in the stratospheric changes; 3) the frequency of recurrence of particular zonal or meridional circulation types varies with the time of the year, being greatest in summer and winter and increasing with altitude; there is a very definite interconnection between the atmospheric processes of contiguous synoptic regions; and 4) solar activity and the stratosphere exert only a secondary influence of tropospheric processes. The results obtained are presented in tabular form in a 72-page supplement and are discussed under the following six chapter headings: 1. Methods of evaluating the intensity of atmospheric circulations; 2. Annual variations in circulation indices in the troposphere (AT_{500}) and lower stratosphere (AT_{100}); 3. Zonal and meridional processes in various regions of the Northern Hemisphere; 4. Relationship of atmospheric processes in contiguous regions of the Northern Hemisphere;

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5. Characteristics of atmospheric circulation in the troposphere and the stratosphere in the Northern Hemisphere in 1958; 6. Interrelationship of atmospheric processes in the Northern Hemisphere among the vertical. The text is accompanied by 18 diagrams and 16 tables, and there are 55 bibliographic references, 43 of which are Soviet.

TABLE OF CONTENTS:

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AM5027848

SUB CODE: ES SUBMITTED: 22Feb65

NO REF SOV: 042 OTHER: 012

Card 4/4

L 26034-66 EWT(1)/FCC GW

ACC NR: AT6013430 SOURCE CODE: UR/2546/65/000/144/0003/0022

AUTHOR: Pogosyan, Kh. P.; Pavlovskaya, A. A. 26 B+1

ORG: none

TITLE: Effect of tropospheric cyclones on intraseasonal variation in temperature and wind in the stratosphere 17

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy, no. 144, 1965. Issledovaniya tsirkulyatsii atmosfery i prognozy vlazhnosti i osadkov (Research on atmospheric circulation and humidity and precipitation forecasts), 3-22

TOPIC TAGS: cyclone, troposphere, stratosphere, atmospheric geopotential, atmospheric temperature, wind

ABSTRACT: The authors consider intraseasonal variations in temperature and air flows in the stratosphere and lower mesosphere with regard to the effect of atmospheric dynamics. Calculations of adiabatic and advective temperature variations show that adiabatic processes are an important factor in stratospheric temperature changes. Observational data on anomalous stratospheric warming above the artic show that this effect results from development of a number of cyclones in the troposphere accompanied by strong meridional transformations in the thermobaric field. An attempt is made to explain this warming process on the basis of data for changes in temperature and geopotential fields in the troposphere and stratosphere. The effect of sclar activity is

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L 26034-66
ACC NR: AT6013430

also briefly considered. Orig. art. has: 6 figures, 5 tables.

SUB CODE: 04/ SUBM DATE: 00/ ORIG REF: 018/ OTH REF: 006

Card 2/2

ACC NR: AM6009949 Monograph UR/

Pogosyan, Khoren Petrovich

Seasonal and intraseasonal variations of temperature, geopotential and atmospheric circulation in the stratosphere (Sezonnyye i vnutrisezonnyye izmeneniya temperatury, geopotentsiala i atmosfernoy tsirkulyatsii v stratosfere) Moscow, Izd-vo "Nauka", 65. 0108 p. illus., biblio. Added t. p. in English.

Series note: Akademiya nauk SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Rezul'taty issledovaniy po mezhdunarodnym geofizicheskim proyektam. Meteorologiya, no. 10

TOPIC TAGS: meteorology, troposphere, stratosphere, atmospheric temperature, atmospheric pressure, wind, weather map

PURPOSE AND COVERAGE: Seasonal conditions of forming temperature and pressure fields in the troposphere and stratosphere, and also seasonal variations of these fields in both spheres are considered. Cartographic and graphic materials are given, in particular: charts of baric topography of the globe for winter and summer compiled by the observational data for the IGY period (AT-300, 200, 100, 50, 30, 10 mb; OT 300/1000, 100/300, 10/100 mb), new schemes of general circulation of atmosphere, atmosphere cross-sections up to 80-100 km, and other auxiliary charts and diagrams. The question of considerable winter warmings in the stratosphere of high latitudes is also discussed and the role played by the processes developing in troposphere is determined.

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ACC NR: AM6009949

TABLE OF CONTENTS (abridged):

SUB CODE: 04 / SUBM DATE: 16Jul65/ ORIG REF: 039/ OTH REF: 020

Card 2/2

POGOSYAN, Kh.P.

Influence of tropospheric processes on changes in the temperature field and circulation in the stratosphere. Meteor. issl. no.9:30-51 '65. (MIRA 19:1)

L 16982-66 EWT(1)/FCC GW

ACC NR: AP6002279 SOURCE CODE: UR/0050/66/000/001/0010/0017

AUTHORS: Pogosyan, Kh. P. (Professor); Pavlovskaya, A. A. (Candidate of geographical sciences)

ORG: Central Forcasting Institute (Tsentral'nyy institut prognozov)

TITLE: The effect of solar activity on changes of temperature and circulation in the stratosphere

SOURCE: Meteorologiya i gidrologiya, no. 1, 1966, 10-17

TOPIC TAGS: solar activity, stratosphere, solar flare, sunspot, atmospheric temperature

ABSTRACT: The authors have tried to trace synchronous changes in solar activity and air temperature at heights of 25-30 km from observational data for three cold-month periods (October-March): 1957-58, 1962-63, and 1963-64. Solar activity is defined by the number of sunspots per day (W), the total area in millionths of the solar hemisphere (S), the number of chromospheric flares, and other indices of change. Graphs of these parameters show that changes in number and area of spots exhibit some periodicity, but no such periodicity is noted in the

Card 1/2 UDC: 551.510.53:523.745

L 16982-66

ACC NR: AP6002279

temperature curve. Great warming of the stratosphere was observed in January 1958, the year of lowest solar activity. Chromospheric flares could not have been responsible for this warming, because they appeared after the beginning of the warming trend. There is thus no direct relation between solar activity and stratospheric temperature. Whatever relation may obtain must be indirect and complex. Anomalous processes in the stratosphere result from interlatitudinal exchange of air masses, beginning in the troposphere. It is concluded that since solar activity may begin to increase at times of various configurations of atmospheric circulation on the earth, the effect of the sun must give different results for the different initial conditions. Orig. art. has: 2 figures and 1 table.

SUB CODE: 04, 03/ SUBM DATE: 12Apr65/ ORIG REF: 017/ OTH REF: 010

Card 2/2 mgs

POGOSYAN, Kh.P.; PAVLOVSKAYA, A.A.

Role of tropospheric vortices in the season-to-season variations in temperature and wind in the stratosphere. Trudy TSIP no.144:3-22 '65. (MIRA 18:11)

POGOSYAN, Kh.P., doktor geograf. nauk, prof.; PAVLOVSKAYA, A.A., kand. geograf. nauk

Some characteristics of the air circulation of the stratosphere in the Northern Hemisphere. Meteor. i gidrol. no.8:3-15 Ag'64 (MIRA 17:8)

1. TSentral'nyy institut prognozov.

POGOSYAN, Kh.P., doktor geograf. nauk, prof.

Work of the Association of Meteorology and Atmospheric Physics at the 13th General Assembly of the International Union of Geodesy and Geophysics. Meteor. i gidrol. no.3: 42-46 Mr '64. (MIRA 17:3)

1. TSentral'nyy institut prognozov.

SKLYAROV, V.M., otv. red.; GRIBANOV, N.N., red.; MUROMTSEV, A.M., red.; POGOSYAN, Kh.P., red.; PROTOPOPOV, V.S., red.; RUDNEV, G.V., red.; SOKOLOV, A.A., red.; SOLOV'YEV, V.A., red.; USMANOV, R.F., red.; ZHDANOVA, L.P., red.; RUSAKOVA, G.Ya., red.; CHEPELKINA, L.A., red.; KOLESOVA, Z.M., tekhn.red.

[Man and the elements; hydrometeorologic desk calendar for 1964] Chelovek i stikhiia; nastol'nyi gidrometeorologicheskii kalendar' 1964. Leningrad, Gidrometeorologicheskoe izd-vo, 1963. 154 p. (MIRA 17:2)

POGOSYAN, Kh.P.; PAVLOVSKAYA, A.A.

Making AT_{300} prognostic charts using diurnal isallohypses.
Trudy TSIP no.122:3-20 '63. (MIRA 16:9)

POGOSYAN, Khoren Petrovich; RUSAKOVA, G.Ya., red.; SERGEYEV, A.N., tekhn. red.

[Air covering the earth]Vozdushnaia obolochka Zemli. Leningrad, Gidrometeoizdat, 1962. 298 p. (MIRA 16:2)
(Atmosphere)

POGOSYAN, K. S.

Special problems in hardening grapevines. Agrobiologiia no.5:688-693 S-O '60. (MIRA 13:10)

1. Institut vinogradarstva, vinodeliya i plodovodstva Armyanskoy SSR, Yerevan.
(Viticulture) (Plant--Hardiness)

POGOSYAN, K.S.

Carbohydrate metabolism in the grapevine during the period of hardening. Izv.AN Arm.SSR. Biol.nauki 13 no.9:81-88 S '60. (MIRA 13:11)

1. Laboratoriya fiziologii rasteniy Instituta vinogradarstva, vinodeliya i plodovodstva Ministerstva sel'skogo khozyaystva Armyanskoy SSR.
(GRAPES)
(CARBOHYDRATE METABOLISM)
(PLANTS--FROST RESISTANCE)

POGOSYAN, K.S., kand. biolog. nauk; SKLYAROVA, I.A.

Behavior of grapevines during thaws followed by frosts. Agro-biologiia no.1:127-130 Ja-F '65. (MIRA 18:4)

1. Institut vinogradarstva, vinodeliya i plodovodstva, Yerevan.

POGOSYAN, L.A., inzhener.

Investigating the performance of trailer-type rollers having drop weights. Stroi. i dor. mashinostr. 2 no.6:15-17 Je '57. (MLRA 10:6)
(Road rollers)

MEYERSON, F.Z.; SADOVSKAYA, L.Yu.; POGOSYAN, L.A.

Blocking role of sulfhydryl groups in the mechanism of the action of cardiac glycosides. Dokl. AN SSSR 150 no.3:702-704 My '63. (MIRA 16:6)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR. Predstavleno akademikom A.N. Bakulevym.

(Cardiac glycosides)
(Mercapto group)

BAKLI, N.M. [Buckley, N.M.]; MEYERSON, F.Z. [Meerson, F.Z.]; POGOSYAN, L.A.; SHENDEROV, S.M.

Effect of nucleosides, strophanthin and combinations of these factors on the development of the process of fatigue in the myocardium. Biul.eksp.biol.i med. 57 no.5:27-31 My '64. (MIRA 18:2)

1. Otdel fiziologii meditsinskogo kolledzha Al'berta Eynshteyna Universiteta Yashiva, N'yu-York i laboratoriya fiziologii i patologii miokarda Instituta normal'noy i patologicheskoy fiziologii AMN SSSR, Moskva. Submitted January 17, 1964.

POGOSYAN,L.A., Cand Tech Sci—(diss) "Study of the performance of a trailer-roller with dump-loads in packing the ground of irrigation canals." Mos, 1958. 21 pp with drawings (VASKhNIL. All-Union Sci Res Inst of Hydraulic Engineering and Melioration VNIIG and M), 150 copies (KL,49-58,124)

POGOSYAN, L.A., inzh.

Using rollers equipped with falling loads for soil compaction. (MIRA 12:6)
Avt.dor. 22 no.4:20-21 Ap '59.
(Soil stabilization) (Road rollers)

MASLYUK, V.I.; POGOSYAN, L.A.

Elimination of the toxic effect of cardiac glycosides with unithiol. Sov. med. 27 no.11:89-92 N '64. (MIRA 18:7)

1. Fakul'tetskaya terapevticheskaya klinika (zav. - deystvitel'nyy chlen AMN SSSR prof. V.N.Vinogradov [deceased] I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova i laboratoriya fiziologii i patologii miokarda (zav. - doktor med. nauk F.Z.Meyerson) Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR prof. V.V.Parin) AMN SSSR, Moskva.

POGOSYAN, L.A.

Role of changes in the mediator metabolism in the mechanism of cardiac insufficiency and the toxic effect of cardias glycosides. Zhur. eksp. i klin. med. 5 no.3:31-36 '65.
(MIRA 19:1)

POGOSYAN, L. S.

PA 63/49T97

USSR/Medicine - Pasteurellosis Mar 49
Medicine - Vaccination

"Vaccinations Against Pasteurellosis," V. S. Gazaryan, Cand Vet Sci, L. S. Pogosyan, Dept on Study of Infectious Diseases of Large Horned Cattle, Armenian Sci Res Vet Sci Inst, 1 p

"Veterinariya" No 3

Killed-in-bile vaccine is used in combination with saponin against pasteurellosis. Five buffalo were given a 20-ml dose three times at 10-day intervals. A 1-ml dose of saponin was administered subcutaneously in the form of a 3% solution 1½ hours before vaccination. Vaccine is good for 4 months.

63/49T97

POGOSYAN, L. S.

"Immunobiological Properties of Antileptospirosis Citrated Blood and Its Practical Utilization Against Leptospirosis in Cattle, Sheep, and Goats." Cand Vet Sci, Inst of Animal Husbandry, Ministry of Agriculture and Procurement, Armenian SSR, Yerevan, 1953. (RZhBiol, No 5, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

POGOSYAN, L. S.

POGOSYAN, L. S. -- "Immunobiological Properties of Antileptospirosis Citrated Blood and Its Practical Use in Leptospirosis of Cattle and Other Small Farm Animals." Cand Vet Sci, Yerevan Zooveterinary Inst, 28 Jan 54
(Kommunist (Yerevan) 8 Jan 54

SO: SUM: 168, 22 July 1954)

POGOSYAN, M.O., mladshiy nauchnyy sotrudnik

Effect of X and gamma rays on the vitamin B_{12} content in the liver and kidneys of white rats. Vop. radiobiol. AN ARM. SSR 2:195-197 '61. (MIRA 18:4)

PUGOSYAN, M.

Seminar on biophysics of the Department of Biophysics and Bionics of the Academy of Sciences of the Armenian S.S.R. Biofizika 9 no. 1:142 '64. (MIRA 17:7)

POGOSYAN, M.; SARKISYAN, S.

Permanent Seminar on Biophysics. Izv. AN Arm. SSR. Biol. nauki 17 no.10:103-104 O '64. (MIRA 18:8)

1. Laboratoriya biofiziki AN ArmSSR.

POGOSYAN, M., kand.tekhn.nauk; AZATYAN, K., kand.tekhn.nauk

Industrial and household water supply in Erivan. Prom. Arm. 4 no.3:7-10 Mr '61. (MIRA 14:6)
(Erivan--Water supply)

POGOSYAN, M. P., (Grad Stud)

Dissertation: -- "Hydraulic Resistance During the Motion of a Two-Phase Liquid Along a Pressure Pipe." Cand Tech Sci, Yerevan Polytechnic Inst imeni K. Marx, 24 Jun 54. (Kommunist, Yerevan, 13 Jun 54)

SO: Sum 318, 23, Dec. 1954

SOV-98-58-2-10/21

AUTHOR: Pogosyan, M.G., Candidate of Technical Sciences

TITLE: The Hydraulic Resistance of a Two Phase Liquid Flowing Through Horizontal Pressure Pipes (Gidravlicheskoye soprotivleniye pri dvizhenii dvukhfaznoy zhidkosti po napornym gorizontal'nym trubam)

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1958, Nr 2, pp 39-42 (USSR)

ABSTRACT: A study of resistances arising during the flow of the two-phase liquid of a hydromixture through horizontal pressure pipes was started by the author. First he studied the resistances appearing when water moves through the same pipes. The pipes used were 50, 75, 105 and 150 mm in diameter. The difference in pressuresin both cases was measured by differential water-air piezometers and a differential mercury manometer constructed so as to measure the pressure within a range of 0.1 to 2,000 mm of water column. The author gives these test results and then gives particulars of the tests with the two-phase liquid (water and sand). The tests with clean water for determining the hydraulic resistances, confirm the studies of Murin and others in regard to the absence of "cavities" on the unmeasurable curves obtained by Nikuradze

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The Hydraulic Resistance of a Two Phase Liquid Flowing Through Horizontal Pressure Pipes

(whose graph is shown in drawing 1). The experiments showed that the two-phase liquid had three zones of motion, in which the hydraulic resistances increased as compared with those of clean water.
There are 5 graphs and 4 Soviet references.

1. Fluid flow--Resistance 2. Pipes--Hydrodynamic characteristics
3. Sand--Properties

MOVSESYAN, M.A.; MAZMANYAN, S.A.; GRIGORYAN, G.T.; POGOSYAN, M.O.

Oscillographic measurements of blood pressure in cancer patients during radiation therapy. Izv. AN Arm. SSR. Biol. nauki no.12 no.9: 85-90 S '59. (MIRA 12:12)

1.Institut rentgenologii i onkologii Minzdrava ArmSSR.
(OSCILLOGRAPHY) (BLOOD PRESSURE) (RADIATION--PHYSIOLOGICAL EFFECT)

POGOSYAN, M.O., mladshiy nauchnyy sotrudnik

Electrophoretic study of the protein composition of blood serum of immunized rabbits. Vop. radiobiol. [AN Arm. SSR] 3/4:141-144 '63.

Effect of ionizing radiation on the vitamin B_{12} concentration in white mice. Ibid.:159-16[illegible] (MIRA 17:6)

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AUTHOR: Pogosyan, M.O., Junior Scientist

TITLE: The effect of ionizing radiation upon the concentration of vitamin B_{12}

SOURCE: Akademiya nauk Armyanskoy SSR. Sektor radiobiologii. Voprosy radiobiologii. v.1, 1960, 103-105

TEXT: The vitamin B_{12} content was determined by a microbiological method in the liver, kidney, spleen and intestine of mice killed at intervals up to 7 days after exposure to X-irradiation in a dose of 760 r. Similar determinations were made on 12 unirradiated animals to establish baseline values; these showed that vitamin B_{12} was mainly present in the lover (53 mg/g) and kidneys (52 mg/g). Irradiation was followed by a rise in vitamin B_{12} content in all organs to a maximum of about 150% of the initial value. No explanation for this finding is offered. The present paper was reported at the Scientific Session of the Section (April 5 and 6, 1960). There is 1 table.

ASSOCIATION: Sektor radiobiologii AN ArmSSR
(Radiobiological Section, AS Arm.SSR)

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MARTIROSYAN, G.M.; MANVELYAN, A.P.; TERLEMEZYAN, G.Ye.; MELKUMYAN, G.G.; AGAMIRYAN, G.N.; TARDZHIMANOV, R.O.; GUKASYAN, V.M.; POGOSYAN, M.P.; MARUKHYAN, A.O.; MARUNOV, P.M., red.; SAROYAN, P., tekhn.red.; MATINYAN, A.A., tekhn.red.

[Forty years of Soviet Armenia; a statistical manual] Sovetskaia Armeniia za 40 let; statisticheskii abornik. Erevan, Armianskoe gos.izd-vo, 1960. 209 p. (MIRA 14:4)

1. Armenian S.S.R. Statisticheskoye upravleniye. 2. Nachal'nik TSentral'nogo statisticheskogo upravleniya pri Sovete Ministrov Armyanskoy SSR (for Martirosyan). 3. Zamestitel' nachal'nika TSentral'nogo statisticheskogo upravleniya pri Sovete Ministrov Armyanskoy SSR (for Manvelyan). 4. TSentral'noye statisticheskoye upravleniye pri Sovete Ministrov Armyanskoy SSR (for Terlemezyan, Melkumyan, Agamiryan, Tardzhimanov, Gukasyan, Pogosyan, Marukhyan). 5. Nachal'nik otdela statistiki svodnykh rabot TSentral'nogo statisticheskogo upravleniya pri Sovete Ministrov Armyanskoy SSR (for Marunov).

(Armenia--Statistics)

FILINA, S.A.; POGOSYAN, N.Kh.

Isohemolysin and isohemoagglutinin content of the blood serums in donors. Probl. gemat. i perel. krovi no.3:10-12 '65.

(MIRA 18:10)

1. Nauchno-issledovatel'skiy institut gematologii i perelivaniya krovi imeni prof. R.O.Yeolyana) direktor - K.A.Antonyan) Ministerstva zdravookhraneniya Armyanskoy SSR, Yerevan.

FILINA, S.A.; POGOSYAN, N.Kh.

Reaction of complement fixation as a test for toxoplasmosis in donors. Zhur. eksp. i klin. med. 4 no.2:85-88 '64. (MIRA 17:8)

1. Institut gematologii i perelivaniya krovi Ministerstva zdravookhraneniya Armyanskoy SSR.

[redacted], P.S.; GRIGORYAN, L.A.

Measurement of the absorption coefficient at high intensities and in an overpopulated medium. Izv.AN Arm.SSR.Ser.fiz.-mat. nauk 18 no.3:129-133 '65. (MIRA 18:8)

1. Obʺyedinennaya radiatsionnaya laboratoriya Yerevanskogo gosudarstvennogo universiteta i AN ArmSSR.

ACC NR: AP7004050 SOURCE CODE: UR/0252/66/043/003/0133/0137

AUTHOR: Mikaelyan, A. L.; Turkov, Yu. G.; Pogosyan, P. S.

ORG: Laboratory of Radiation Problems, Yerevan State University (Radiatsionnaya problemnaya laboratoriya Yerevanskogo gosudarstvennogo universiteta); Academy of Sciences, Armenian SSR (Akademiya nauk Armyanskoy SSR)

TITLE: Measuring the power characteristics of a laser amplifier

SOURCE: AN ArmSSR. Doklady, v. 43, no. 3, 1966, 133-137

TOPIC TAGS: ruby laser, ~~laser amplifier, optical amplifier,~~ laser efficiency, laser power characteristic, LASER POWER AMPLIFIER, LASER ENERGY

ABSTRACT: The master laser consisted of a ruby rod 120 mm long and 6.5 mm in diameter pumped by a 500-j flashlamp. The laser output was Q-switched by a rotating (20×10^3 rpm) prism and consisted of 0.2-j 50-nanosec pulses. The laser amplifier used ruby rods 120 and 240 mm long. The beam energy was measured by means of a calorimeter with a sensitivity of 300 μw/j. The gain of a 24-cm laser amplifier was shown to decrease with increasing output energy. To eliminate interference by regeneration, the rod ends were set at angles of 15—20' with the mirror. The maximum gain was observed at indication angles of about 5'. Further increase to about 15' resulted in the traveling-wave operation. The authors thank V. Ya. Antonyants for his help. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 001/ [WA-14]

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L 62677-65 EWA(k)/FBD/EWT(1)/EWT(m)/EWP(d)/EEC(k)-2/EWP(1)/EED(b)-2/T/EWP(k)/EWA(m)-2/EWA(h) SOTB/IJP(c) WG/WH

ACCESSION NR: AP5018625 UR/0022/65/018/003/0129/0133

AUTHOR: Pogosyan, P. S.; Grigoryan, L. O.

TITLE: Measurement of the absorption coefficient at large intensities and in an overpopulated medium

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 18, no. 3, 1965, 129-133

TOPIC TAGS: laser, ruby laser, level population, absorption coefficient, [illegible] coefficient, optical pumping

ABSTRACT: After showing that at large radiation intensities the absorption coefficient is a function of the intensity and consequently varies from point to point in the medium, the authors introduce an effective absorption coefficient, defined as

$$\beta_{eff} = \frac{1}{l} \ln \frac{U_0^*}{U_l^*}$$

and derive for it the theoretical expression

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